

Listing of Claims

This Listing of Claims shall replace all prior versions and listings of claims in the application.

1-33. (Cancelled)

34. (Currently Amended) A host cell comprising a vector, wherein said vector comprises an isolated polynucleotide molecule, said isolated polynucleotide molecule comprising:

(a) a first nucleic acid molecule at least 90% identical to SEQ ID NO: 1, wherein said first nucleic acid molecule encodes an aspartate kinase (ask) polypeptide at least 80% identical to SEQ ID NO: 2, wherein said ask polypeptide has aspartate kinase activity in *Corynebacterium*;

(b) a second nucleic acid molecule at least 90% identical to SEQ ID NO: 3, wherein said second nucleic acid molecule encodes an aspartate-semialdehyde dehydrogenase (asd) polypeptide at least 80% identical to SEQ ID NO: 4, wherein said asd polypeptide has aspartate-semialdehyde dehydrogenase activity in *Corynebacterium*;

(c) a third nucleic acid molecule at least 90% identical to SEQ ID NO: 5, wherein said third nucleic acid molecule encodes a dihydrodipicolinate reductase polypeptide at least 80% identical to SEQ ID NO: 6, wherein said dihydrodipicolinate reductase polypeptide has dihydrodipicolinate reductase activity in *Corynebacterium*; and

(d) a fourth nucleic acid molecule at least 90% identical to SEQ ID NO: 7, wherein said fourth nucleic acid molecule encodes a diaminopimelate dehydrogenase (ddh) polypeptide at least 80% identical to SEQ ID NO: 8, wherein said ddh polypeptide has diaminopimelate dehydrogenase (ddh) activity in *Corynebacterium*;

~~The host cell of claim 31~~ wherein said host cell is of the genus *Brevibacterium* selected from the group consisting of the cells deposited as NRRL-B30218, NRRL-B30219, NRRL-B30220, NRRL-B30221, NRRL-B30222, NRRL-B30234, NRRL-B30235, NRRL-B30410, ~~NRRL-B30458, NRRL-B30459~~ and NRRL-B30522.

35. (Currently Amended) ~~The host cell of claim 20~~ A host cell comprising a vector,
wherein said vector comprises an isolated polynucleotide molecule, said isolated polynucleotide
molecule comprising:

(a) a first nucleic acid molecule at least 90% identical to SEQ ID NO: 1,
wherein said first nucleic acid molecule encodes an aspartate kinase (ask) polypeptide at
least 80% identical to SEQ ID NO: 2, wherein said ask polypeptide has aspartate kinase
activity in *Corynebacterium*;

(b) a second nucleic acid molecule at least 90% identical to SEQ ID NO: 3,
wherein said second nucleic acid molecule encodes an aspartate-semialdehyde
dehydrogenase (asd) polypeptide at least 80% identical to SEQ ID NO: 4, wherein said
asd polypeptide has aspartate-semialdehyde dehydrogenase activity in *Corynebacterium*;

(c) a third nucleic acid molecule at least 90% identical to SEQ ID NO: 5,
wherein said third nucleic acid molecule encodes a dihydrodipicolinate reductase
polypeptide at least 80% identical to SEQ ID NO: 6, wherein said dihydrodipicolinate
reductase polypeptide has dihydrodipicolinate reductase activity in *Corynebacterium*; and

(d) a fourth nucleic acid molecule at least 90% identical to SEQ ID NO: 7,
wherein said fourth nucleic acid molecule encodes a diaminopimelate dehydrogenase
(ddh) polypeptide at least 80% identical to SEQ ID NO: 8, wherein said ddh polypeptide
has diaminopimelate dehydrogenase (ddh) activity in *Corynebacterium*;

wherein said host cell is of the genus *Corynebacterium* selected from the group consisting of the cells deposited as NRRL-B30236, NRRL-B30237, ~~NRRL-B30458~~, and NRRL-B30522.

36. (Currently Amended) ~~The host cell of claim 24~~ A host cell comprising a vector,
wherein said vector comprises an isolated polynucleotide molecule, said isolated polynucleotide
molecule comprising:

(a) a first nucleic acid molecule at least 90% identical to SEQ ID NO: 1,
wherein said first nucleic acid molecule encodes an aspartate kinase (ask) polypeptide at
least 80% identical to SEQ ID NO: 2, wherein said ask polypeptide has aspartate kinase
activity in *Corynebacterium*;

(b) a second nucleic acid molecule at least 90% identical to SEQ ID NO: 3,
wherein said second nucleic acid molecule encodes an aspartate-semialdehyde
dehydrogenase (asd) polypeptide at least 80% identical to SEQ ID NO: 4, wherein said
asd polypeptide has aspartate-semialdehyde dehydrogenase activity in *Corynebacterium*;

(c) a third nucleic acid molecule at least 90% identical to SEQ ID NO: 5,
wherein said third nucleic acid molecule encodes a dihydrodipicolinate reductase
polypeptide at least 80% identical to SEQ ID NO: 6, wherein said dihydrodipicolinate
reductase polypeptide has dihydrodipicolinate reductase activity in *Corynebacterium*; and

(d) a fourth nucleic acid molecule at least 90% identical to SEQ ID NO: 7,
wherein said fourth nucleic acid molecule encodes a diaminopimelate dehydrogenase
(ddh) polypeptide at least 80% identical to SEQ ID NO: 8, wherein said ddh polypeptide
has diaminopimelate dehydrogenase (ddh) activity in *Corynebacterium*;

wherein said host cell is an *Escherichia coli* ~~*E. coli*~~ cell ~~[[is]]~~ deposited as NRRL-B30228.

37-43. (Cancelled).

44. (Previously Presented) An isolated polynucleotide molecule comprising:

- (a) a first nucleic acid molecule with SEQ ID NO: 1;
- (b) a second nucleic acid molecule with SEQ ID NO: 3;
- (c) a third nucleic acid molecule with SEQ ID NO: 5; and
- (d) a fourth nucleic acid molecule with SEQ ID NO: 7.